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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,805	08/04/2003	Majid Entezarian	065640-0210	5552
22428	7590	06/09/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			HOPKINS, ROBERT A	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/632,805

Applicant(s)

ENTEZARIAN ET AL.

Examiner

Robert A. Hopkins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,6,7,9-11,16-26,44-46,49,78,80,92,93,95-97 and 99-165 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 4,96,101,113,125,136 and 156 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5-11-05, 5-4-05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims rejected are 1,2,6,7,9-11,16-26,44-46,49,78,80,92,93,95,97,99,100,102-112,114-124,126-135,137-155 and 157-165.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,6,7,9,10,11,16-<sup>26</sup>~~28~~ are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a separation cartridge comprising a baffle filter(20), and a packed bed of porous inorganic particles(22) positioned adjacent to the baffle filter, wherein the baffle filter and packed bed are coupled together in the cartridge, and wherein the cartridge is used to separate one or more entrained oleo substances from a gas stream in a kitchen hood system. Terrel further teaches wherein the particles are .25 mm to approximately 4 mm in size. Terrel et al further teaches wherein the particles are a plurality of sizes. Terrel further teaches wherein the particles comprise an exterior surface and a plurality of channels that open onto the exterior surface and define interior channels. Terrel et al further teaches wherein the channels have a mean size of approximately 0.01 microns to approximately 100 microns. Terrel et al further teaches wherein the particles are approximately 15% porous to approximately 70% porous. Terrel et al further teaches wherein the baffle filter is in contact with the

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packed bed. Terrel et al further teaches wherein the cartridge is approximately 2.5 cm to 6.4 cm wide. Terrel et al further teaches wherein the kitchen hood system is used to vent the gas stream into the atmosphere. Terrel et al further teaches a frame(12) which is used to hold the baffle filter and packed bed together. Terrel et al further teaches wherein the packed bed is configured to be easily removed from the frame. Terrel et al further teaches wherein the baffle filter, the packed bed, and the frame are fixedly coupled together.

Claims 44-46,49,93,95,112,114,115-121 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a separation cartridge comprising a plurality of physically separate filters each of which includes a separation medium, wherein the plurality of filters are coupled together to form the cartridge, wherein at least one of the filters includes a packed bed of particles(22), and wherein the separation cartridge is used to separate an entrained oleo substance from a gas stream in a kitchen hood system. Terrel et al further teaches wherein the cartridge includes only two filters. Terrel et al further teaches wherein at least one of the plurality of filters includes a baffle filter(20). Terrel et al further teaches wherein the kitchen hood system is used to vent the gas stream into the atmosphere. Terrel et al further teaches wherein the plurality of filters includes a mesh filter. Terrel et al further teaches wherein the baffle filter is in contact with the packed bed. Terrel et al further teaches wherein the packed bed is at least substantially flat. Terrel et al further teaches wherein the particles absorb the oleo

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substance. Terrel et al further teaches wherein the cartridge is configured to be mounted between opposing , U-shaped railings in the kitchen hood which are each approximately 1.3 cm to approximately 7.6 cm wide. Terrel et al further teaches wherein at least one of the plurality of filters is configured to be easily removed from the cartridge. Terrel et al further teaches wherein the plurality of filters includes a plurality of perforated plates(20) which are spaced apart from each other. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et al further teaches wherein the particles include particles that are approximately 0.25 mm to approximately 4 mm in size. Terrel et al further teaches wherein the first railing and the second railing are each substantially U-shaped and approximately 1.3 mm to approximately 7.6 mm wide.

Claims 44 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Meunier(5022901).

Meunier teaches a separation cartridge comprising a plurality of physically separate filters each of which includes a separation medium, wherein the plurality of filters are coupled together to form the cartridge, wherein at least one of the filters includes a packed bed of particles(18).

Claims 78,80,97,122-124,126-131 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a separation system comprising a kitchen hood(not shown) including a first railing and a second railing, the first railing being positioned opposite

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the second railing, and a cartridge comprising a plurality of separation mediums including a bed of particles, the plurality of separation mediums being used to separate one or more entrained oleo substances from the air, wherein the first railing and second railing are used to hold the plurality of separation mediums. Terrel et al further teaches wherein the plurality of separation mediums include a baffle filter. Terrel et al further teaches wherein the baffle filter is in contact with the bed of particles. Terrel et al further teaches wherein the first railing and the second railing are each substantially U-shaped and approximately 1.3 mm to approximately 7.6 mm wide. Terrel et al further teaches wherein the bed of particles is at least substantially flat. Terrel et al further teaches wherein the particles absorb the oleo substance. Terrel et al further teaches wherein the cartridge includes a frame(12) that is used to hold the plurality of separation mediums. Terrel et al further teaches wherein the plurality of separation mediums includes a plurality of perforated plates which are spaced from each other. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et al further teaches wherein the particles include particles that are approximately 0.25 mm to approximately 4 mm in size.

Claims 92 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a separation cartridge comprising a first means for separating an entrained oleo substance from a gas stream in a kitchen hood using a baffle filter(20), a second means for separating an entrained oleo substance from a gas

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stream in a kitchen hood using a packed bed(22), and a frame used to hold the first and second means together form the cartridge, wherein the cartridge is removable from the kitchen hood.

Claims 99,100,102-111 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a separation cartridge comprising a baffle filter(20) and a bed of particles(22) coupled together with the baffle filter to form the cartridge, wherein the cartridge is used to separate one or more entrained oleo substances from a gas stream in a kitchen hood system. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et al further teaches wherein the particles are solid. Terrel et al further teaches wherein the baffle filter is in contact with the bed of particles. Terrel et al further teaches wherein the cartridge is approximately 2.5 cm to 6.4 cm wide. Terrel et al further teaches wherein the kitchen hood system is used to vent the gas stream into the atmosphere. Terrel et al further teaches wherein the bed of particles is at least substantially flat. Terrel et al further teaches wherein the particles absorb the oleo substance. Terrel et al further teaches wherein the cartridge includes particles that are approximately 0.25 mm to approximately 4 mm in size.

Claims 132-135,137-142 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a system comprising a kitchen hood, and a cartridge that includes a bed of particles(22) and one or more additional filters(20), wherein the



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cartridge is positioned in the kitchen hood to separate an oleo substance from a gas stream which passes through the kitchen hood. Terrel et al further teaches wherein the bed of particles is removable from the cartridge(column 5 lines 17-25). Terrel et al further teaches wherein the one or more additional filters include a baffle filter. Terrel et al further teaches wherein the bed of particles is at least substantially flat. Terrel et al further teaches wherein the kitchen hood includes a first railing and a second railing positioned opposite the first railing, wherein the first railing and second railing are substantially U-shaped, and wherein the first railing and second railing are used to support the cartridge(by frame 12). Terrel et al further teaches wherein the first and second railings are each approximately 3.5 cm to approximately 5.1 cm wide. Terrel et al further teaches wherein the one or more additional filters and bed of particles are in contact with each other in the cartridge. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et al further teaches wherein the particles include particles that are approximately 0.25 mm to approximately 4 mm in size.

Claims 143,144-153 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al(3854912).

Terrel et al teaches a system comprising a kitchen hood(not shown) including a railing having a substantially U-shaped cross section, a baffle filter(20), and a bed of particles(22) which is used to separate one or more entrained oleo substances from a gas stream which passes through the kitchen hood, wherein the railing is used to

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support the baffle filter and the bed of particles in the kitchen hood. Terrel et al further teaches wherein the bed of particles is at least substantially flat. Terrel et al further teaches wherein the particles absorb the oleo substance. Terrel et al further teaches wherein the baffle filter is in contact with the bed of particles. Terrel et al further teaches wherein the kitchen hood is used to vent the gas stream into the atmosphere. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et al further teaches wherein the baffle filter and the bed of particles are included in a cartridge that is supported by the railing. Terrel et al further teaches wherein the bed of particles is configured to be easily removed from the cartridge. Terrel et al further teaches wherein the particles include particles that are approximately 0.25 mm to approximately 4 mm in size. Terrel et al further teaches wherein the railing is a first railing and the kitchen hood includes a second railing positioned opposite the first railing, and wherein the first railing and the second railing are used to hold the baffle filter and the bed of particles in the kitchen hood.

Claims 154, 155, 157-165 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terrel et al (3854912).

Terrel et al teaches a separation cartridge comprising a baffle filter (20) and a bed of particles (22), wherein the cartridge is used to separate one or more entrained oleo substances from a gas stream in a kitchen hood, and wherein no additional filters are positioned between the baffle filter and the bed of particles in the cartridge. Terrel et al further teaches wherein the particles include porous inorganic particles. Terrel et

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al further teaches wherein the particles are solid. Terrel et al further teaches wherein the baffle filter is in contact with the bed of particles. Terrel et al further teaches wherein the cartridge is approximately 2.5 cm to approximately 6.4 cm wide. Terrel et al further teaches wherein the kitchen hood is used to vent the gas stream into the atmosphere. Terrel et al further teaches wherein the bed of particles is at least substantially flat. Terrel et al further teaches wherein the particles absorb the oleo substance. Terrel et al further teaches wherein the cartridge is configured to be mounted between opposing U-shaped railings in the kitchen hood which are approximately 1.3 cm to approximately 7.6 cm wide. Terrel et al further teaches wherein the particles include particles that are approximately 0.25 mm to approximately 4 mm in size.

*Allowable Subject Matter*

Claims 4,96,101,113,125,136,156 are objected to as being dependant upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4,101,113,125,136,156 recite wherein the packed bed is pleated. Terrel et al teaches a flat packed bed. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide packed bed of particles which is pleated because Terrel et al does not suggest such a modification.

Claim 96 recites "comprising ductwork coupled to the kitchen hood, wherein a catalytic converter is positioned in the ductwork". Terrel et al teaches a kitchen hood

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system, but does not teach ductwork coupled to the kitchen hood, wherein a catalytic converter is positioned in the ductwork. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide ductwork coupled to the kitchen hood, wherein a catalytic converter is positioned in the ductwork, because Terrel et al does not suggest such a modification.

The following is a list of references which are indicated as not being applied:

Zafioglu(4923725) teaches a separator for use in an kitchen hood, wherein the separator includes a frame for surrounding an adsorbent bed of a plurality of porous inorganic particles.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See 37 CFR 1.103(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136 will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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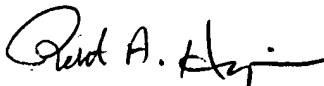
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval(PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more in information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

RAH

May 31, 2005

  
ROBERT A. HOPKINS  
PRIMARY EXAMINER  
A.U. 1724